

## **IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims**

- 1 1-11. Cancelled.
- 1 12. (Previously Presented) A method comprising:
  - 2 acquiring an image of or pertaining to a heart;
  - 3 acquiring a first data set pertaining to one or more locations of a heart
  - 4 vector of the heart, the first data set being spatially correlated with the image;
  - 5 acquiring a second data set pertaining to one or more locations of the
  - 6 heart vector of the heart; and
  - 7 registering a representation of a probe with the image by registering
  - 8 the location of the heart vector from the first data set with the location of the heart
  - 9 vector from the second data set, wherein the second data set is acquired using at least
  - 10 one lead positioned on a skin surface, wherein the location of the heart vector from
  - 11 the second data set can be determined relative to the lead, and wherein the location of
  - 12 the probe can also be determined relative to the lead.
- 1 13. (Previously Presented) The method of claim 12, wherein the image comprises one
- 2 or more images obtained using computed tomography, magnetic resonance, or
- 3 ultrasound.
- 1 14. Cancelled.
- 1 15. (Previously Presented) The method of claim 12, wherein the acquiring the second
- 2 data step and the registering step are performed on a repeating basis.

1       16. (Currently Amended) A method comprising:  
2                  acquiring an image of or pertaining to a heart;  
3                  registering a location of a first heart vector from a first data set relative  
4        a lead system at a skin surface of an imaged subject, wherein the first heart vector  
5       represents a summation of electrical currents at a particular time, the summation  
6       having a direction and an amplitude;

7                  registering a location of the second heart vector from the second data  
8        set relative to the lead system; and

9                  adjusting the size or position of the image dependent on a change in  
10      the location ~~of~~between the first and second heart vector generated from the first and  
11      second data sets, respectively.

1       17. (Original) The method of claim 16, further comprising registering a  
2       representation of a probe with an image, the probe being located in or adjacent to a  
3       heart.

1       18. Cancelled.

1       19. (Original) The method of claim 16, wherein the image is correlated to a first heart  
2       vector data set and the image is adjusted by comparing the first heart vector data set to  
3       a second heart vector data set.

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1        20. (Currently Amended) A system comprising:

2                  a lead system located at a skin surface of an imaged subject and |

3        operable to acquire a first data set and a second data set pertaining to one or more |

4        locations of a first and second heart vector, respectively, of the heart;

5                  a processor configured to be communicatively coupled to a probe, the |

6        probe being configured to be located in or adjacent to a heart;

7                  memory configured to store:

8                  an image of at least a portion of the heart;

9                  the first data set pertaining to one or more locations of the first |

10        heart vector of the heart, the first data set being spatially correlated with the |

11        image;

12                  the second data set pertaining to one or more locations of the |

13        second heart vector of the heart;

14                  a display configured to display the image and a representation of the |

15        probe, the image being registered with the representation of the probe by registering |

16        the first heart vector from the first data set with the second heart vector from the |

17        second data set, wherein the location of the heart vector from the second data set can |

18        be determined relative to the lead, and wherein the location of the probe can also be |

19        determined relative to the lead.

1        21. (Original) The system of claim 20, wherein the display is configured to display a |

2        map of electrical properties of the heart in conjunction with the image and |

3        representation of the probe.

1        22. (Original) The system of claim 20, wherein the first and second data sets are |

2        obtained using a plurality of electrocardiogram leads.

1        23. (Previously Presented) The system of claim 20, wherein the representation of the |

2        probe is registered with the image by registering the first heart vector from the first |

3        data set with the second heart vector from the second data set for at least a portion of |

4        the cardiac cycle.

- 1    24. (Original) The system of claim 23, wherein the portion of the cardiac cycle
- 2    comprises at least a portion of the QRS segment.
- 1    25. (Original) The system of claim 20, wherein the system is an electrophysiology
- 2    monitoring system.
- 1    26. (Original) The system of claim 20, wherein the second data set is spatially correlated
- 2    with the probe.
- 1    27. Cancelled.